

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P243793

Luminaire Tested: S125RDRP-H375D940-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243793  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125RDRP-H375D940-X4F0-XX-UDD-A-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

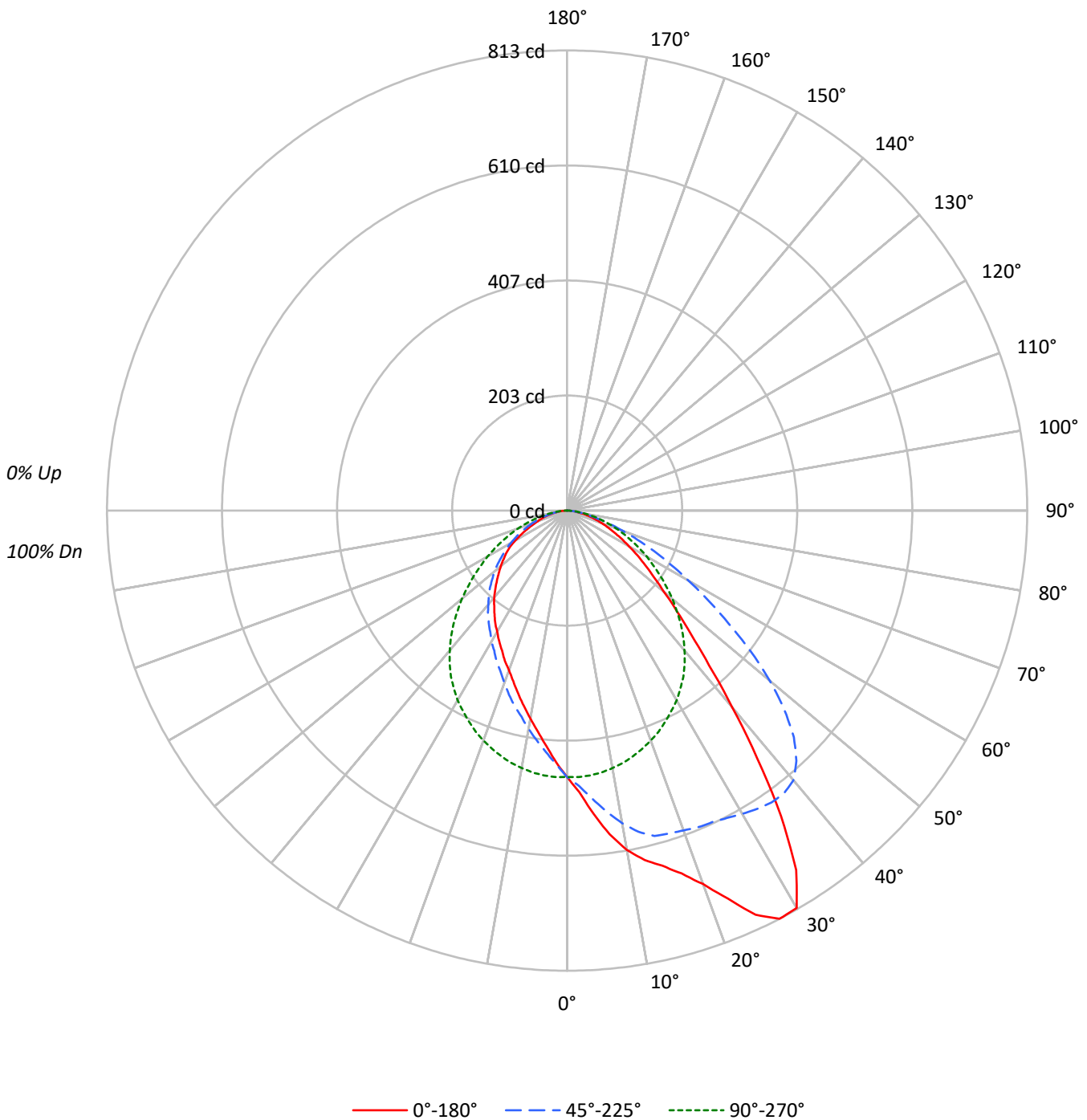
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1252.7 lumens  
Efficiency: N/A  
Efficacy: 111.9 lumens/watt  
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5  
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75					73				
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65					63				
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56					54				
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50					48				
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44					42				
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39					37				
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35					33				
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32					30				
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29					27				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	3345	3345	3345	3345	3345
5°	3840	3649	3350	3055	2980
10°	4394	4048	3334	2828	2694
15°	4779	4380	3307	2633	2463
20°	5310	4547	3270	2451	2270
25°	6180	4762	3223	2309	2137
30°	6654	5078	3175	2190	2028
35°	5716	5462	3104	2095	1940
40°	4211	5772	2992	2011	1860
45°	3111	5694	2854	1936	1763
50°	2465	5168	2682	1855	1692
55°	2082	4313	2486	1741	1628
60°	1794	3524	2303	1635	1507
65°	1557	2844	2097	1500	1312
70°	1365	2161	1920	1357	1147
75°	1159	1573	1681	1200	1087
80°	900	1138	1404	1056	900
85°	791	840	1125	897	824

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 5694 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.3	3.6
10°-20°	134.0	10.7
20°-30°	213.8	17.1
30°-40°	259.6	20.7
40°-50°	233.9	18.7
50°-60°	179.9	14.4
60°-70°	116.7	9.3
70°-80°	56.2	4.5
80°-90°	13.3	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	393.2	31.4
0°-40°	652.7	52.1
0°-60°	1066.5	85.1
0°-90°	1252.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1252.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	471	471	471	471	471	
5°	538	511	470	428	418	54
15°	650	595	449	358	335	186
25°	788	607	411	294	272	360
35°	659	630	358	242	224	403
45°	310	566	284	193	175	246
55°	168	348	201	140	131	152
65°	93	169	125	89	78	93
75°	42	57	61	44	40	45
85°	10	10	14	11	10	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7
2.5°	498.0	499.8	498.3	499.3	497.8	497.0	495.2	492.4	489.6	486.9	486.8
5°	538.3	537.9	536.4	534.4	532.9	529.1	527.3	520.9	516.6	511.4	508.8
7.5°	576.7	575.8	573.6	570.8	569.4	564.6	559.4	551.3	544.6	536.4	530.3
10°	608.8	608.6	607.0	605.1	600.1	594.6	589.6	581.2	571.1	560.9	552.3
12.5°	632.3	631.4	629.4	626.2	622.1	618.3	611.6	604.0	591.7	581.2	569.4
15°	649.5	649.1	646.2	645.0	637.0	631.8	622.8	615.2	605.7	595.2	582.5
17.5°	672.3	673.0	670.4	664.1	656.8	648.8	636.1	623.6	610.3	598.2	587.9
20°	702.1	700.3	695.8	688.1	675.1	665.2	652.5	637.0	619.1	601.2	586.4
22.5°	742.1	740.0	732.9	723.6	707.2	689.1	669.7	646.5	626.0	605.5	586.1
25°	788.0	784.1	773.6	763.6	740.2	721.0	692.1	664.4	634.6	607.3	585.5
27.5°	813.0	813.0	808.2	797.1	778.7	750.3	720.8	684.0	649.5	612.2	581.2
30°	810.8	809.5	811.3	806.7	794.7	773.4	744.1	705.5	661.5	618.7	581.6
32.5°	752.9	753.5	764.7	772.3	778.3	773.1	754.0	719.1	675.3	625.1	580.1
35°	658.8	660.3	680.1	693.2	719.9	735.2	739.7	720.8	681.4	629.5	577.5
37.5°	551.3	551.3	574.3	594.1	623.9	661.6	689.8	696.9	677.7	629.4	575.2
40°	453.9	453.4	471.5	495.7	527.6	569.3	611.3	647.3	651.9	622.1	567.4
42.5°	371.4	370.5	390.3	403.7	437.3	474.4	530.3	581.2	610.3	599.5	555.8
45°	309.5	308.7	321.6	336.9	360.6	399.2	446.1	502.6	551.5	566.5	534.2
47.5°	262.8	263.2	270.1	282.9	303.1	330.7	372.7	425.2	485.6	520.2	506.9
50°	222.9	224.2	229.4	239.1	253.8	276.0	312.1	359.5	421.6	467.4	470.2
52.5°	193.0	194.9	200.5	205.7	218.0	233.7	261.7	302.7	354.1	408.9	428.5
55°	168.0	168.9	172.1	177.7	186.8	199.9	220.2	251.6	299.2	348.1	382.6
57.5°	147.1	147.1	149.1	153.0	160.3	172.1	185.7	211.7	251.8	296.0	332.8
60°	126.2	126.9	128.4	132.7	137.6	146.5	159.8	176.2	210.9	247.9	287.4
62.5°	108.6	109.9	111.4	113.5	118.0	124.3	133.6	148.8	172.1	206.2	241.5
65°	92.6	93.9	94.1	96.5	99.5	104.7	111.8	122.8	142.2	169.1	198.2
67.5°	78.4	78.9	79.5	81.4	84.2	87.5	92.2	100.4	115.7	133.8	162.2
70°	65.7	66.1	66.3	68.3	69.6	72.6	75.0	80.3	90.0	104.0	126.0
72.5°	53.8	53.2	53.0	54.7	55.2	57.7	60.7	64.4	69.6	79.5	95.9
75°	42.2	42.4	42.6	43.5	43.7	44.8	46.7	49.1	51.5	57.3	67.8
77.5°	32.5	31.7	31.7	32.8	33.2	33.4	34.7	36.0	37.3	40.7	44.8
80°	22.0	22.4	22.4	22.4	22.6	23.0	23.7	24.8	25.8	27.8	28.6
82.5°	15.7	15.7	15.5	15.9	16.1	16.2	16.2	16.2	16.8	17.4	18.1
85°	9.7	9.9	9.3	9.7	9.9	9.9	9.9	9.9	10.5	10.3	10.5
87.5°	4.1	4.3	4.3	4.5	4.5	4.7	4.5	4.7	4.5	4.5	4.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7
2.5°	486.2	484.0	482.8	480.6	477.6	475.8	473.9	471.3	469.2	466.0	463.2
5°	504.1	499.6	495.5	489.9	484.5	479.9	475.0	469.6	464.7	459.3	453.5
7.5°	524.1	517.0	508.4	498.5	490.1	482.8	474.6	466.6	459.3	450.7	442.9
10°	543.3	531.9	520.5	507.3	495.0	484.1	473.1	461.9	452.4	441.8	432.1
12.5°	558.2	547.4	530.4	514.0	498.0	484.0	470.2	456.5	444.0	432.3	420.7
15°	571.3	553.4	539.0	521.1	501.5	482.5	465.3	449.4	434.3	420.5	408.7
17.5°	575.0	559.0	543.3	522.4	501.3	479.7	459.9	441.0	424.2	408.9	395.7
20°	574.7	558.4	541.4	521.5	499.1	475.4	453.4	432.3	413.2	395.7	381.5
22.5°	569.1	553.4	536.2	516.1	493.3	468.8	445.7	422.4	401.7	383.4	368.8
25°	563.1	543.3	525.4	505.1	483.4	460.8	436.2	411.0	389.3	370.3	353.9
27.5°	557.9	534.2	512.1	492.2	470.0	449.6	425.2	398.9	376.6	356.7	339.7
30°	549.5	524.5	497.8	475.9	454.5	433.2	410.8	386.9	362.6	342.3	325.3
32.5°	542.2	510.7	481.7	457.1	435.6	417.0	395.5	372.5	348.8	329.4	311.1
35°	534.2	496.5	466.2	437.3	415.8	395.5	378.5	357.8	334.3	313.7	297.3
37.5°	524.7	481.9	447.2	417.7	395.5	374.6	359.3	340.8	319.5	299.2	282.9
40°	514.0	467.0	427.0	396.6	372.7	351.8	338.9	322.5	304.4	284.3	269.1
42.5°	500.6	451.1	408.7	375.5	349.0	330.2	317.3	303.7	287.1	269.5	253.1
45°	483.6	431.3	386.9	351.8	325.7	307.4	294.0	283.9	270.6	254.2	238.7
47.5°	462.9	410.6	364.5	328.1	302.9	285.4	272.9	262.8	252.7	238.5	223.8
50°	435.4	386.9	342.7	305.5	278.8	261.9	250.7	242.6	233.5	221.9	208.5
52.5°	405.2	360.2	316.9	282.2	256.4	239.5	227.9	221.2	214.3	204.7	193.2
55°	370.1	333.5	292.3	258.3	233.1	216.3	207.2	200.6	194.9	187.6	177.9
57.5°	333.0	300.9	265.0	233.7	210.0	194.1	186.1	180.7	175.8	170.6	162.6
60°	294.0	271.2	237.2	208.5	187.8	174.7	167.0	162.0	157.5	153.2	147.3
62.5°	253.3	234.4	209.0	184.6	166.1	153.8	148.2	143.9	139.2	135.5	131.2
65°	212.0	201.2	183.7	160.7	143.7	133.6	128.2	124.7	122.4	118.1	114.8
67.5°	174.5	168.5	153.6	138.1	125.1	115.9	110.9	108.3	105.8	103.8	100.0
70°	138.9	134.6	126.0	115.0	104.7	96.9	93.1	92.4	89.0	87.0	85.1
72.5°	105.8	104.7	97.6	92.8	87.0	80.8	78.0	76.5	74.3	72.4	71.7
75°	75.2	76.9	74.7	72.2	69.4	64.4	62.0	61.2	59.2	58.6	57.7
77.5°	51.3	53.8	54.5	53.4	52.1	50.4	48.7	48.0	45.9	45.5	45.0
80°	32.3	35.8	37.1	37.0	36.4	36.6	34.5	34.3	33.4	32.8	33.4
82.5°	19.6	21.5	23.9	24.5	23.7	24.1	23.5	22.8	22.8	23.1	22.4
85°	10.6	10.8	11.9	12.7	13.6	14.4	13.6	13.8	13.6	13.6	13.1
87.5°	4.7	4.9	4.9	4.7	5.0	5.4	6.2	6.5	6.3	5.8	5.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7
2.5°	461.0	459.7	457.5	455.6	451.3	448.3	447.9	448.1	447.8	447.4	447.2
5°	449.8	445.5	441.4	437.9	433.0	428.2	425.9	425.0	424.6	422.6	423.7
7.5°	437.9	431.3	426.5	419.8	414.0	409.9	405.9	404.1	403.7	400.9	400.2
10°	425.2	417.3	410.1	403.3	397.5	391.8	387.1	385.4	383.2	380.9	377.6
12.5°	412.7	403.0	394.9	387.5	379.6	373.1	369.4	366.9	364.1	362.1	361.0
15°	397.7	389.5	379.6	371.6	363.6	357.8	352.8	348.3	345.7	344.0	339.3
17.5°	384.3	373.5	364.1	356.5	347.7	341.2	336.0	332.2	327.7	324.4	321.4
20°	369.9	358.7	350.1	341.0	332.0	324.0	317.5	314.5	311.3	308.1	306.5
22.5°	354.4	344.7	335.0	325.5	316.0	307.4	303.3	299.0	296.2	293.0	290.8
25°	341.0	330.4	320.7	310.0	299.6	294.5	288.9	284.6	282.4	279.2	276.8
27.5°	326.6	316.4	304.8	293.8	287.6	279.0	275.3	271.9	269.0	265.8	264.1
30°	313.2	301.2	289.7	281.1	273.1	266.9	263.4	259.2	255.1	253.6	251.4
32.5°	299.0	286.1	276.0	267.5	260.7	253.3	249.9	246.6	242.6	240.8	238.7
35°	284.3	271.8	261.9	254.0	247.1	241.5	237.8	234.2	231.8	229.0	227.5
37.5°	268.8	257.9	248.4	240.6	234.2	229.8	225.1	222.3	218.9	216.3	215.2
40°	254.0	244.3	235.2	227.9	222.1	216.7	212.6	209.0	207.0	204.7	202.9
42.5°	240.8	230.7	222.9	215.2	210.0	204.7	200.6	198.0	194.5	193.5	190.9
45°	226.6	217.3	209.4	202.3	196.9	192.6	187.8	184.6	182.3	180.1	179.2
47.5°	212.2	203.6	196.3	189.8	184.2	179.4	175.6	172.3	169.8	167.8	166.7
50°	198.2	190.7	183.5	177.1	171.3	167.8	163.3	159.6	157.7	155.5	154.2
52.5°	183.5	177.3	169.5	164.1	158.6	154.0	149.5	147.1	145.2	143.3	142.4
55°	169.7	163.1	156.4	150.6	145.4	140.5	137.0	135.1	132.7	131.6	131.4
57.5°	155.5	148.8	143.2	137.9	132.0	128.2	125.1	122.8	120.8	119.8	119.8
60°	140.0	134.6	129.3	123.6	119.3	115.0	111.6	110.1	108.1	107.7	106.4
62.5°	125.8	120.8	115.7	110.3	106.4	102.1	99.7	97.6	96.5	95.0	93.5
65°	111.1	106.6	101.7	97.1	93.9	89.2	87.0	84.5	83.2	81.6	79.7
67.5°	96.9	92.6	88.1	83.8	81.2	76.7	75.2	72.2	71.3	69.4	67.8
70°	81.9	78.9	75.4	71.1	68.9	65.3	63.8	61.0	59.5	58.4	57.5
72.5°	69.1	66.3	62.2	59.4	56.6	54.3	51.9	50.6	49.3	48.3	48.2
75°	56.4	52.8	50.4	47.8	45.9	43.7	42.6	41.6	41.1	40.5	39.9
77.5°	43.1	41.6	39.2	36.6	35.1	34.2	33.4	33.0	32.5	32.3	31.7
80°	32.1	30.0	28.6	27.6	26.5	25.8	25.2	23.9	23.1	22.8	22.4
82.5°	21.3	20.7	19.6	18.7	17.7	17.5	17.0	16.6	16.4	16.4	16.2
85°	12.9	11.4	11.4	11.2	11.2	11.0	10.6	10.6	10.3	10.8	10.8
87.5°	5.2	5.2	4.9	4.9	5.0	4.7	4.5	4.5	4.5	4.3	4.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243793

CATALOG NUMBER: S125RDRP-H375D940-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	470.7	470.7	470.7	470.7
2.5°	447.2	446.3	446.4	445.3
5°	421.6	421.1	419.2	417.7
7.5°	398.3	395.9	395.7	394.2
10°	376.5	374.2	373.1	373.3
12.5°	357.4	355.0	355.0	353.5
15°	337.1	334.6	335.0	334.8
17.5°	320.3	318.6	317.3	316.2
20°	303.9	301.8	301.1	300.1
22.5°	288.7	287.2	287.4	287.4
25°	274.4	274.6	272.9	272.5
27.5°	261.7	261.3	260.9	260.2
30°	249.7	248.2	247.9	247.1
32.5°	237.4	237.2	235.7	236.3
35°	224.9	224.3	224.0	223.6
37.5°	213.3	212.2	212.0	211.7
40°	201.6	201.2	199.5	200.5
42.5°	188.9	188.1	188.1	188.1
45°	178.2	176.2	176.2	175.4
47.5°	166.3	165.6	165.2	163.9
50°	154.5	153.4	153.0	153.0
52.5°	142.4	142.2	142.6	141.8
55°	131.8	132.0	131.8	131.4
57.5°	120.2	119.3	119.3	119.5
60°	106.4	106.4	106.8	106.0
62.5°	93.1	92.8	91.5	91.1
65°	79.5	78.0	77.8	78.0
67.5°	67.4	66.8	65.9	66.1
70°	56.9	56.7	55.8	55.2
72.5°	47.6	47.6	47.0	47.0
75°	39.8	39.4	39.2	39.6
77.5°	30.6	29.7	30.0	29.5
80°	22.2	22.6	22.2	22.0
82.5°	16.4	16.1	16.2	16.1
85°	10.5	10.1	10.3	10.1
87.5°	4.3	4.5	4.5	4.1
90°	0.0	0.0	0.0	0.0



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.12	15.66	14.48	15.97	16.28	14.82	16.36	15.18	16.67	16.98
	3H	15.20	16.58	15.58	16.91	17.27	16.29	17.67	16.67	18.00	18.36
	4H	15.56	16.85	15.96	17.20	17.58	16.82	18.11	17.22	18.46	18.84
	6H	15.78	16.97	16.19	17.34	17.73	17.17	18.37	17.58	18.74	19.13
	8H	15.83	16.97	16.26	17.36	17.76	17.27	18.41	17.70	18.80	19.20
	12H	15.87	16.96	16.30	17.34	17.77	17.33	18.42	17.76	18.80	19.23
4H	2H	15.64	16.93	16.04	17.28	17.66	15.69	16.98	16.09	17.33	17.71
	3H	16.68	17.76	17.09	18.16	18.56	17.35	18.42	17.76	18.82	19.22
	4H	17.05	18.01	17.48	18.43	18.87	17.95	18.91	18.38	19.33	19.77
	6H	17.29	18.13	17.75	18.57	19.03	18.38	19.22	18.84	19.66	20.12
	8H	17.35	18.14	17.82	18.58	19.05	18.50	19.29	18.97	19.73	20.20
	12H	17.40	18.10	17.88	18.58	19.05	18.59	19.29	19.07	19.77	20.24
8H	4H	17.41	18.19	17.87	18.63	19.10	18.10	18.89	18.56	19.33	19.80
	6H	17.70	18.35	18.20	18.84	19.32	18.62	19.27	19.12	19.76	20.24
	8H	17.79	18.38	18.31	18.89	19.37	18.80	19.38	19.31	19.89	20.38
	12H	17.88	18.39	18.39	18.89	19.45	18.94	19.45	19.45	19.94	20.51
12H	4H	17.43	18.13	17.91	18.61	19.08	18.09	18.79	18.57	19.27	19.74
	6H	17.73	18.31	18.24	18.82	19.31	18.61	19.20	19.13	19.71	20.19
	8H	17.86	18.38	18.37	18.87	19.44	18.83	19.35	19.34	19.84	20.40