

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: P242601

Luminaire Tested: S124DRP-S795D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242601
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-S795D830-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

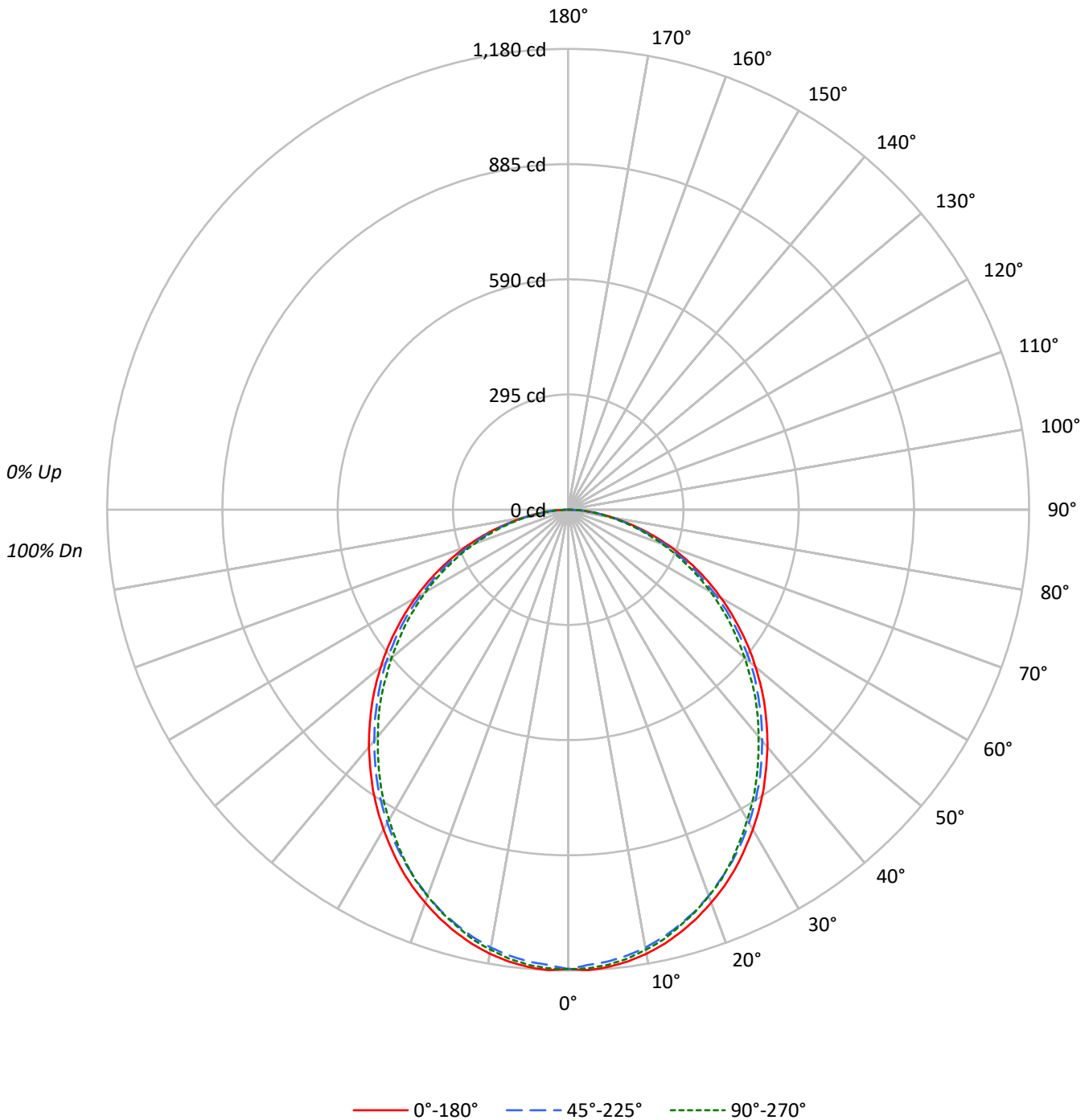
Lumens per Lamp: N/A
Luminaire Lumens: 3019.2 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 26.2
Input Voltage (V): 120
Input Current (A_{in}): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10456	10456	10456
5°	10488	10361	10437
10°	10421	10277	10328
15°	10296	10131	10157
20°	10128	9950	9959
25°	9937	9743	9716
30°	9704	9500	9413
35°	9461	9246	9123
40°	9209	8957	8793
45°	8945	8673	8507
50°	8654	8420	8159
55°	8341	8093	7829
60°	8027	7724	7490
65°	7673	7374	7078
70°	7274	6908	6638
75°	6670	6343	6182
80°	5933	5692	5549
85°	5191	4997	4906

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8945 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.9	3.7
10°-20°	312.4	10.3
20°-30°	459.7	15.2
30°-40°	534.4	17.7
40°-50°	534.3	17.7
50°-60°	467.4	15.5
60°-70°	347.0	11.5
70°-80°	196.9	6.5
80°-90°	56.4	1.9
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°	882.9	29.2
0°-40°	1417.3	46.9
0°-60°	2419.0	80.1
0°-90°	3019.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3019.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1176	1176	1176	1176	1176	
5°	1175	1172	1161	1172	1170	112
15°	1119	1115	1101	1106	1104	315
25°	1013	1007	993	994	991	466
35°	872	865	852	846	841	545
45°	712	705	690	680	677	549
55°	538	535	522	511	505	482
65°	365	360	351	341	336	361
75°	194	190	185	181	180	206
85°	51	51	49	49	48	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1176.3	1176.3	1176.3	1176.3	1176.3
2.5°	1180.1	1177.2	1166.9	1176.3	1175.4
5°	1175.4	1171.6	1161.2	1171.6	1169.7
7.5°	1166.9	1163.1	1151.8	1160.3	1159.3
10°	1154.6	1150.8	1138.6	1146.1	1144.2
12.5°	1138.6	1134.8	1121.6	1130.1	1127.3
15°	1118.8	1115.0	1100.9	1106.5	1103.7
17.5°	1096.2	1091.5	1078.3	1082.0	1080.2
20°	1070.7	1066.0	1051.9	1054.7	1052.8
22.5°	1043.4	1036.8	1022.7	1028.3	1024.5
25°	1013.2	1006.6	993.4	994.4	990.6
27.5°	979.3	972.7	960.5	958.6	953.9
30°	945.4	937.8	925.6	921.8	917.1
32.5°	909.6	903.0	889.8	885.0	880.3
35°	871.9	865.3	852.1	845.5	840.7
37.5°	832.3	826.6	812.5	805.9	799.3
40°	793.6	786.1	771.9	762.5	757.8
42.5°	752.2	748.4	732.4	721.0	718.2
45°	711.6	705.0	689.9	679.6	676.7
47.5°	669.2	664.5	650.4	639.0	631.5
50°	625.8	622.1	608.9	595.7	590.0
52.5°	583.4	578.7	564.6	553.3	545.7
55°	538.2	535.4	522.2	510.9	505.2
57.5°	495.8	493.0	479.8	468.4	462.8
60°	451.5	446.8	434.5	426.0	421.3
62.5°	408.1	404.4	391.2	383.6	378.9
65°	364.8	360.1	350.6	341.2	336.5
67.5°	320.5	316.7	307.3	297.8	296.9
70°	279.9	273.3	265.8	258.3	255.4
72.5°	236.6	230.0	224.3	218.7	215.8
75°	194.2	189.5	184.7	181.0	180.0
77.5°	152.7	150.8	146.1	145.2	142.3
80°	115.9	113.1	111.2	109.3	108.4
82.5°	80.1	79.2	79.2	78.2	77.3
85°	50.9	50.9	49.0	49.0	48.1
87.5°	24.5	23.6	22.6	22.6	22.6
90°	0.0	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	19.45	21.07	19.82	21.38	21.70	19.08	20.69	19.44	21.01	21.32
	3H	21.21	22.67	21.59	23.00	23.36	20.79	22.25	21.17	22.57	22.93
	4H	21.87	23.24	22.27	23.59	23.97	21.43	22.81	21.83	23.15	23.53
	6H	22.34	23.62	22.75	23.98	24.37	21.91	23.18	22.32	23.55	23.94
	8H	22.49	23.71	22.92	24.10	24.50	22.07	23.28	22.49	23.67	24.07
	12H	22.60	23.76	23.03	24.14	24.57	22.18	23.34	22.61	23.72	24.15
4H	2H	20.02	21.40	20.42	21.75	22.12	19.73	21.10	20.12	21.45	21.82
	3H	22.00	23.15	22.41	23.55	23.95	21.65	22.80	22.06	23.20	23.60
	4H	22.79	23.83	23.22	24.24	24.68	22.42	23.46	22.85	23.88	24.31
	6H	23.39	24.30	23.84	24.74	25.20	23.03	23.93	23.48	24.37	24.83
	8H	23.59	24.44	24.05	24.88	25.35	23.23	24.08	23.69	24.52	24.99
	12H	23.74	24.50	24.22	24.98	25.45	23.39	24.15	23.87	24.62	25.09
8H	4H	23.06	23.91	23.52	24.36	24.82	22.74	23.59	23.20	24.03	24.50
	6H	23.79	24.49	24.28	24.98	25.46	23.47	24.17	23.96	24.66	25.14
	8H	24.06	24.69	24.57	25.20	25.68	23.75	24.38	24.26	24.89	25.37
	12H	24.28	24.85	24.79	25.34	25.90	23.98	24.54	24.48	25.03	25.59
12H	4H	23.09	23.86	23.57	24.33	24.80	22.78	23.54	23.26	24.02	24.49
	6H	23.83	24.47	24.34	24.98	25.46	23.53	24.16	24.03	24.67	25.15
	8H	24.16	24.72	24.67	25.21	25.78	23.87	24.43	24.37	24.92	25.48