

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930452

Luminaire Tested: DFN2DS-PN2F0-030DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930452
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN2F0-030DS950-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

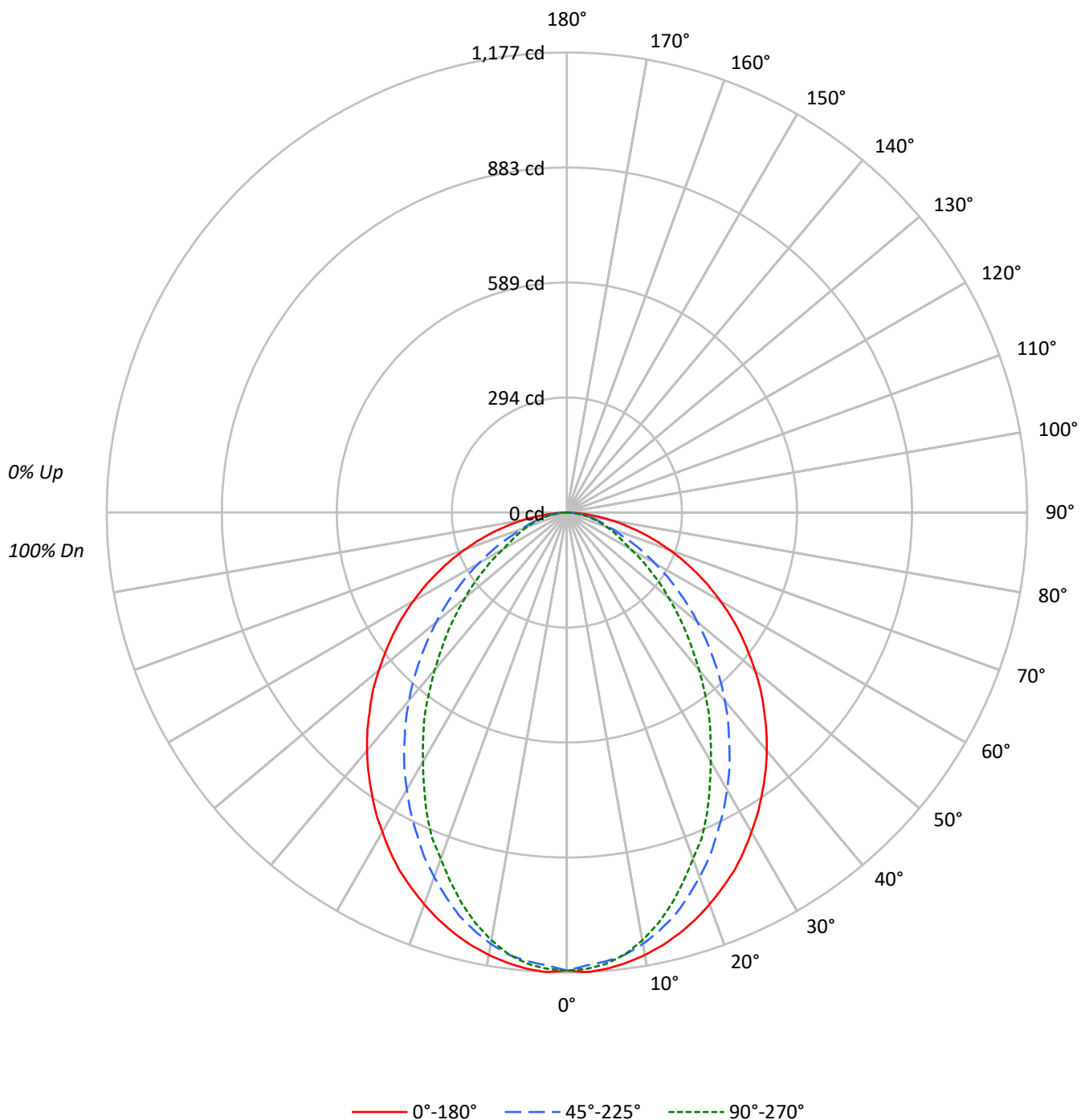
Lumens per Lamp: N/A
Luminaire Lumens: 2409.7 lumens
Efficiency: N/A
Efficacy: 78.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 30.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2538	2538	2538
5°	2547	2506	2520
10°	2528	2465	2444
15°	2499	2392	2323
20°	2459	2287	2173
25°	2417	2169	2027
30°	2360	2047	1840
35°	2305	1915	1677
40°	2249	1778	1487
45°	2183	1624	1315
50°	2115	1468	1147
55°	2046	1301	985
60°	1966	1125	818
65°	1875	946	744
70°	1766	778	685
75°	1632	710	639
80°	1442	634	582
85°	1131	499	499

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2183 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.8	4.6
10°-20°	301.5	12.5
20°-30°	423.2	17.6
30°-40°	461.4	19.1
40°-50°	424.0	17.6
50°-60°	333.0	13.8
60°-70°	216.8	9.0
70°-80°	111.6	4.6
80°-90°	28.5	1.2
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°	834.5	34.6
0°-40°	1295.9	53.8
0°-60°	2052.9	85.2
0°-90°	2409.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2409.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1172	1172	1172	1172	1172	
5°	1172	1166	1153	1162	1159	111
15°	1114	1103	1067	1047	1036	314
25°	1012	978	908	864	848	465
35°	872	818	724	657	634	546
45°	713	642	530	455	429	550
55°	542	459	344	281	261	484
65°	366	280	184	148	145	363
75°	195	121	85	77	76	206
85°	46	23	20	20	20	55
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1171.7	1171.7	1171.7	1171.7	1171.7
2.5°	1177.0	1171.7	1160.0	1170.7	1168.6
5°	1171.7	1166.4	1152.6	1162.2	1158.9
7.5°	1162.2	1155.8	1141.0	1145.2	1139.9
10°	1149.4	1142.0	1120.9	1117.6	1111.3
12.5°	1133.5	1124.0	1095.3	1089.0	1077.3
15°	1114.4	1102.7	1066.7	1046.6	1036.0
17.5°	1092.1	1075.2	1030.6	1007.4	990.4
20°	1066.7	1045.5	992.4	966.1	942.6
22.5°	1039.2	1014.7	953.2	917.2	901.3
25°	1011.6	977.6	907.7	864.2	848.2
27.5°	978.7	942.6	865.2	815.4	791.0
30°	943.8	903.4	818.6	764.6	735.9
32.5°	909.8	861.0	774.1	710.5	683.9
35°	871.7	817.5	724.2	657.4	634.1
37.5°	834.5	776.1	677.6	604.3	578.0
40°	795.3	731.7	628.8	553.5	526.0
42.5°	755.0	687.2	580.0	501.5	475.1
45°	712.6	641.5	530.2	454.8	429.4
47.5°	672.3	597.1	482.5	407.1	383.9
50°	627.8	552.4	435.8	362.6	340.4
52.5°	584.2	504.7	391.3	321.3	301.2
55°	541.8	459.1	344.5	281.0	260.9
57.5°	498.4	413.5	303.3	243.9	226.9
60°	453.8	369.0	259.8	205.7	188.8
62.5°	410.4	325.6	222.6	171.8	163.4
65°	365.8	279.9	184.5	148.5	145.2
67.5°	323.5	237.5	148.5	130.4	127.2
70°	278.9	196.2	122.9	112.4	108.1
72.5°	236.4	157.9	102.8	94.4	92.2
75°	195.0	120.9	84.9	77.4	76.4
77.5°	153.8	85.8	66.8	62.6	60.4
80°	115.6	61.5	50.8	46.7	46.7
82.5°	80.5	41.4	35.0	32.9	32.9
85°	45.5	23.2	20.1	20.1	20.1
87.5°	17.0	8.4	8.4	7.5	7.5
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	14.47	15.99	14.83	16.30	16.62	10.43	11.95	10.80	12.27	12.58
	3H	16.24	17.60	16.61	17.93	18.29	11.70	13.06	12.07	13.39	13.75
	4H	16.90	18.18	17.30	18.53	18.91	12.20	13.48	12.60	13.83	14.21
	6H	17.39	18.57	17.80	18.94	19.33	12.58	13.76	12.99	14.13	14.52
	8H	17.56	18.68	17.98	19.07	19.47	12.70	13.83	13.13	14.22	14.62
	12H	17.66	18.74	18.09	19.12	19.55	12.78	13.86	13.21	14.24	14.67
4H	2H	14.57	15.85	14.97	16.20	16.58	11.13	12.41	11.53	12.76	13.13
	3H	16.51	17.57	16.92	17.97	18.37	12.57	13.63	12.98	14.03	14.43
	4H	17.26	18.21	17.69	18.63	19.07	13.17	14.13	13.60	14.54	14.98
	6H	17.85	18.68	18.31	19.12	19.58	13.66	14.49	14.11	14.93	15.39
	8H	18.06	18.84	18.53	19.28	19.75	13.82	14.60	14.28	15.04	15.51
	12H	18.22	18.91	18.70	19.39	19.86	13.94	14.63	14.42	15.11	15.58
8H	4H	17.28	18.06	17.74	18.50	18.97	13.52	14.30	13.99	14.74	15.21
	6H	17.92	18.56	18.42	19.05	19.53	14.11	14.75	14.61	15.24	15.72
	8H	18.17	18.75	18.68	19.26	19.74	14.33	14.91	14.85	15.42	15.91
	12H	18.37	18.88	18.88	19.37	19.94	14.51	15.02	15.02	15.51	16.08
12H	4H	17.27	17.96	17.75	18.44	18.91	13.57	14.26	14.05	14.74	15.21
	6H	17.90	18.48	18.41	18.99	19.47	14.17	14.75	14.69	15.26	15.75
	8H	18.18	18.69	18.69	19.19	19.75	14.45	14.96	14.96	15.45	16.01