

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: P929875

Luminaire Tested: DFN2DS-4P3F0-030DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929875
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P3F0-030DS950-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

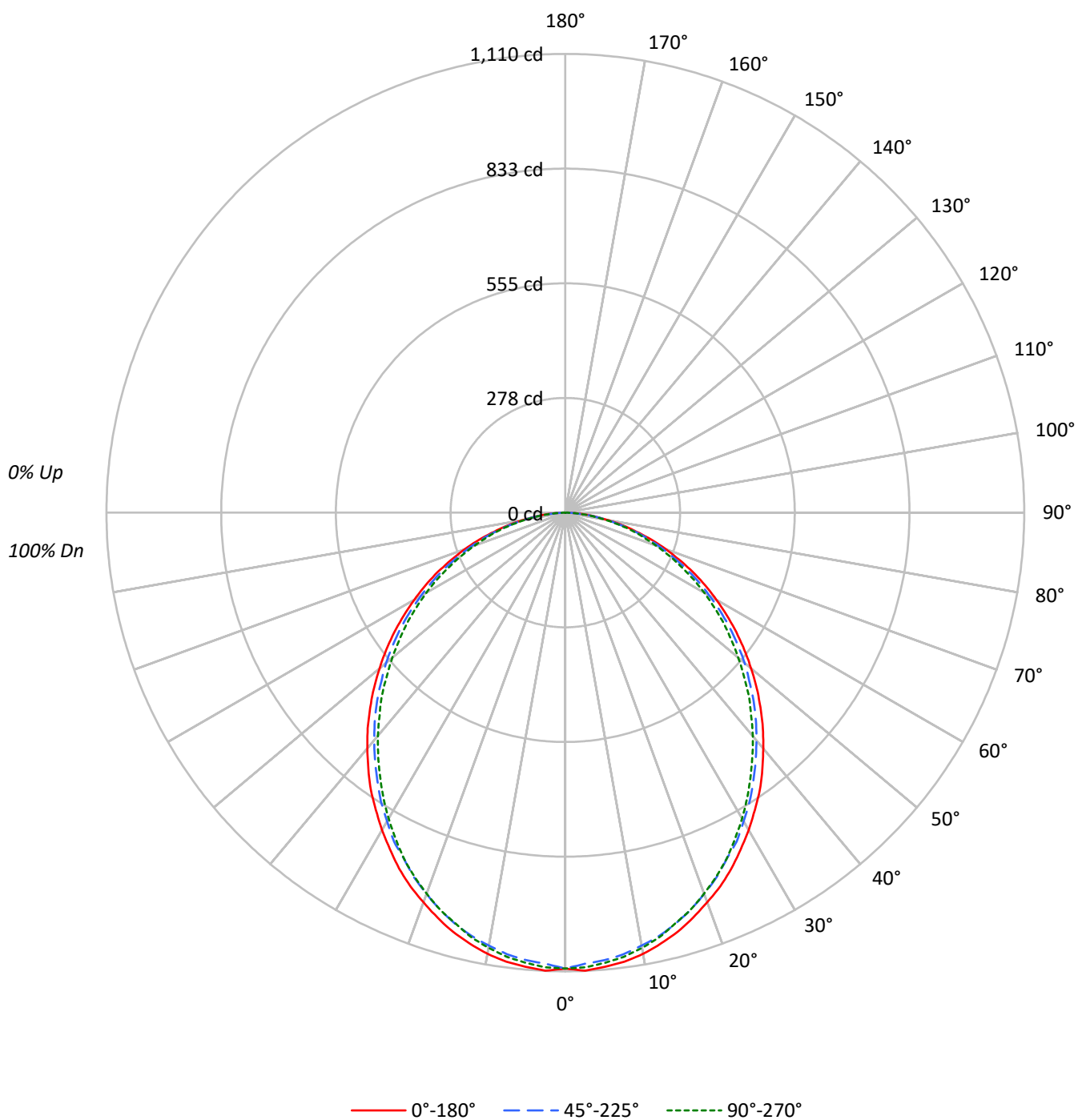
Lumens per Lamp: N/A
Luminaire Lumens: 2806.7 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 28.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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	30	10	50	30	10
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	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71		
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60		
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51		
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45		
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39		
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35		
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	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	53	40	33	28	39	32	27	38	32	27	37	32	27	26		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1257	1257	1257
5°	1262	1244	1251
10°	1254	1231	1237
15°	1239	1215	1214
20°	1217	1191	1190
25°	1195	1162	1162
30°	1167	1135	1125
35°	1141	1102	1086
40°	1108	1070	1049
45°	1075	1038	1012
50°	1040	1004	969
55°	1003	965	930
60°	962	919	885
65°	918	873	832
70°	862	816	778
75°	784	752	734
80°	696	675	641
85°	569	541	485

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1075 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.8	3.7
10°-20°	292.1	10.4
20°-30°	429.3	15.3
30°-40°	498.6	17.8
40°-50°	498.0	17.7
50°-60°	434.2	15.5
60°-70°	321.0	11.4
70°-80°	181.6	6.5
80°-90°	47.9	1.7
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°	825.3	29.4
0°-40°	1323.9	47.2
0°-60°	2256.1	80.4
0°-90°	2806.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2806.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1103	1103	1103	1103	1103	
5°	1103	1099	1087	1096	1094	105
15°	1050	1044	1030	1034	1029	296
25°	950	942	924	926	924	437
35°	820	809	792	786	781	512
45°	667	660	644	632	628	515
55°	505	499	486	473	468	451
65°	341	334	324	314	309	337
75°	178	176	171	164	167	190
85°	44	42	41	38	37	51
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1103.1	1103.1	1103.1	1103.1	1103.1
2.5°	1109.5	1104.2	1092.5	1103.1	1101.1
5°	1103.1	1098.9	1087.2	1095.7	1093.6
7.5°	1095.7	1089.4	1077.7	1086.3	1084.1
10°	1084.1	1076.6	1064.0	1072.4	1069.3
12.5°	1068.1	1061.8	1049.1	1054.3	1052.3
15°	1050.1	1043.8	1030.0	1034.2	1028.9
17.5°	1027.8	1021.5	1007.7	1012.9	1007.7
20°	1003.4	997.1	982.2	985.4	981.2
22.5°	979.1	969.6	955.7	955.7	953.5
25°	950.4	942.0	923.9	926.0	923.9
27.5°	918.5	911.1	897.4	894.3	889.0
30°	886.8	878.3	862.4	859.2	854.9
32.5°	852.9	846.5	829.5	823.1	818.8
35°	820.0	809.4	792.4	786.0	780.7
37.5°	782.8	773.3	756.3	748.8	743.5
40°	744.7	736.2	719.1	709.7	705.4
42.5°	707.5	699.0	682.1	671.4	665.1
45°	667.3	659.8	643.8	632.2	628.0
47.5°	628.0	620.6	603.6	591.9	585.5
50°	586.6	581.3	566.4	551.6	546.3
52.5°	546.3	538.8	525.1	513.4	506.0
55°	505.0	498.6	485.8	473.2	467.9
57.5°	463.5	458.2	444.4	431.7	427.4
60°	422.1	418.0	403.1	391.4	388.3
62.5°	381.9	374.4	363.8	353.2	349.0
65°	340.6	334.2	323.6	314.0	308.7
67.5°	298.1	292.8	283.2	275.8	271.6
70°	258.8	254.6	245.0	237.6	233.4
72.5°	218.6	214.2	208.9	201.6	198.4
75°	178.1	176.1	170.8	164.4	166.6
77.5°	142.1	137.9	135.7	132.6	129.5
80°	106.1	105.0	102.8	99.7	97.6
82.5°	72.1	72.1	71.2	66.8	66.8
85°	43.5	42.4	41.4	38.2	37.1
87.5°	19.1	17.0	14.8	11.7	10.6
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	12.08	13.69	12.44	14.00	14.32	11.63	13.24	12.00	13.56	13.87
	3H	13.83	15.28	14.20	15.61	15.97	13.34	14.79	13.71	15.12	15.48
	4H	14.47	15.84	14.87	16.19	16.57	13.98	15.35	14.38	15.70	16.07
	6H	14.94	16.21	15.35	16.58	16.97	14.44	15.71	14.85	16.08	16.47
	8H	15.09	16.30	15.51	16.69	17.08	14.58	15.79	15.01	16.18	16.58
	12H	15.18	16.34	15.61	16.72	17.15	14.66	15.82	15.09	16.21	16.63
4H	2H	12.64	14.01	13.04	14.35	14.73	12.29	13.65	12.68	14.00	14.38
	3H	14.61	15.76	15.02	16.16	16.56	14.21	15.35	14.62	15.75	16.15
	4H	15.39	16.43	15.82	16.84	17.27	14.97	16.00	15.40	16.42	16.85
	6H	15.99	16.89	16.44	17.33	17.79	15.55	16.46	16.01	16.90	17.36
	8H	16.18	17.02	16.64	17.46	17.93	15.74	16.58	16.20	17.03	17.49
	12H	16.31	17.07	16.79	17.54	18.01	15.86	16.62	16.34	17.09	17.56
8H	4H	15.66	16.51	16.12	16.95	17.42	15.29	16.14	15.75	16.58	17.04
	6H	16.38	17.08	16.87	17.57	18.04	16.00	16.70	16.49	17.19	17.66
	8H	16.64	17.27	17.15	17.77	18.26	16.24	16.88	16.75	17.38	17.87
	12H	16.84	17.39	17.34	17.88	18.45	16.42	16.98	16.93	17.47	18.03
12H	4H	15.69	16.45	16.17	16.92	17.39	15.32	16.08	15.80	16.56	17.03
	6H	16.42	17.05	16.93	17.56	18.05	16.05	16.69	16.56	17.19	17.68
	8H	16.74	17.29	17.24	17.78	18.35	16.36	16.92	16.87	17.41	17.97