

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: P930083

Luminaire Tested: DFN2DS-HX2F0-040DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930083
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-HX2F0-040DS927-FLL
Description: 2 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

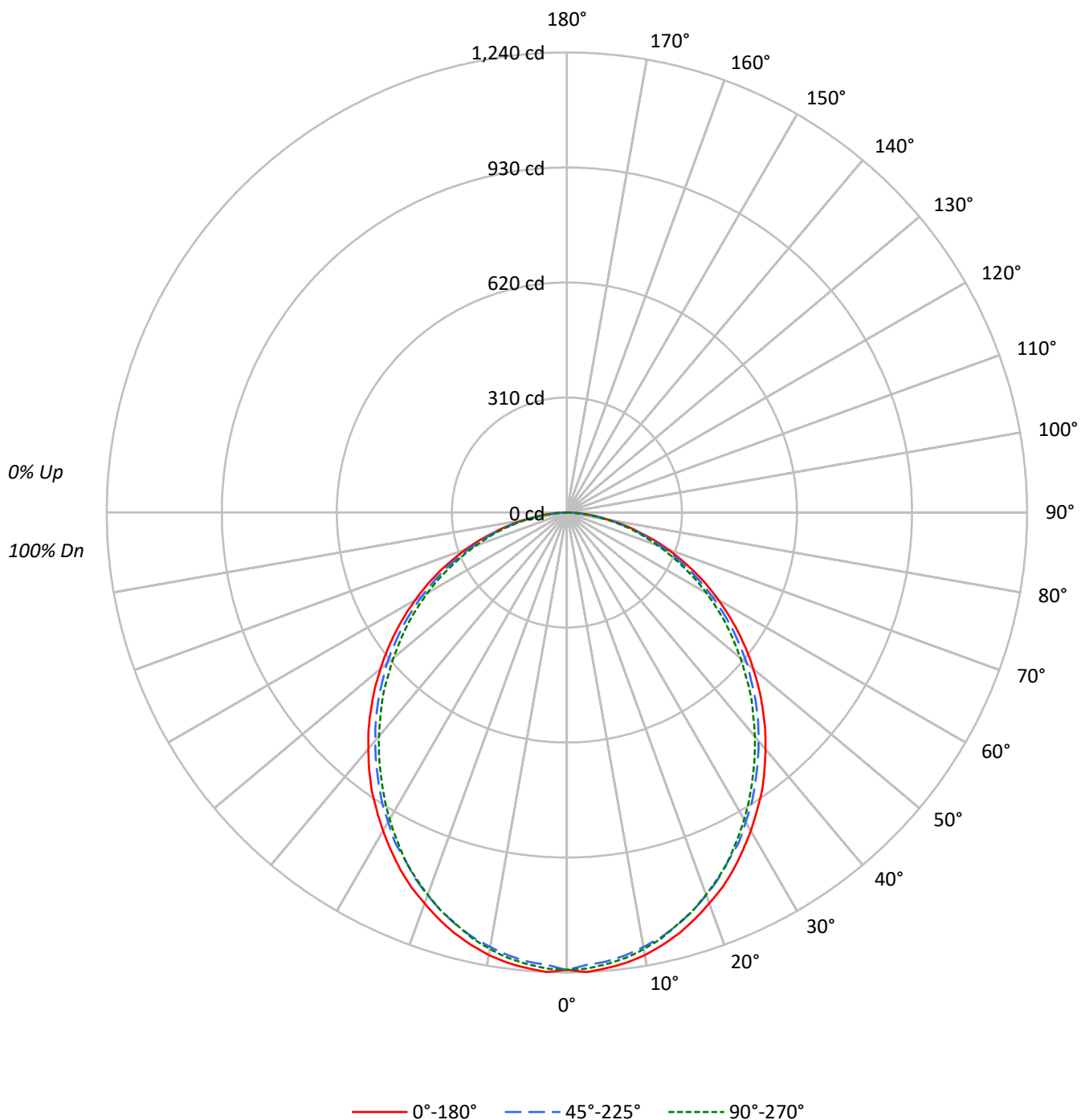
Lumens per Lamp: N/A
Luminaire Lumens: 3136.3 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 38.4
Input Voltage (V): 120
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2904	2904	2904
5°	2916	2873	2890
10°	2898	2845	2859
15°	2862	2807	2805
20°	2811	2752	2749
25°	2761	2684	2684
30°	2696	2622	2599
35°	2636	2547	2509
40°	2560	2472	2425
45°	2484	2397	2338
50°	2403	2320	2237
55°	2318	2230	2148
60°	2223	2123	2045
65°	2122	2015	1923
70°	1992	1886	1797
75°	1812	1737	1694
80°	1609	1559	1480
85°	1311	1252	1122

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2484 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.0	3.7
10°-20°	326.4	10.4
20°-30°	479.7	15.3
30°-40°	557.2	17.8
40°-50°	556.5	17.7
50°-60°	485.2	15.5
60°-70°	358.7	11.4
70°-80°	202.9	6.5
80°-90°	53.6	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°	922.2	29.4
0°-40°	1479.4	47.2
0°-60°	2521.1	80.4
0°-90°	3136.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3136.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1233	1233	1233	1233	1233	
5°	1233	1228	1215	1224	1222	117
15°	1173	1166	1151	1156	1150	330
25°	1062	1053	1032	1035	1032	489
35°	916	904	886	878	872	572
45°	746	737	720	706	702	575
55°	564	557	543	529	523	504
65°	381	373	362	351	345	376
75°	199	197	191	184	186	213
85°	48	47	46	43	42	57
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1232.7	1232.7	1232.7	1232.7	1232.7
2.5°	1239.9	1233.9	1220.9	1232.7	1230.5
5°	1232.7	1228.0	1214.9	1224.4	1222.1
7.5°	1224.4	1217.3	1204.2	1213.8	1211.4
10°	1211.4	1203.1	1189.0	1198.4	1194.8
12.5°	1193.5	1186.5	1172.3	1178.3	1175.8
15°	1173.4	1166.4	1150.9	1155.7	1149.8
17.5°	1148.6	1141.5	1126.1	1131.9	1126.1
20°	1121.2	1114.2	1097.6	1101.1	1096.5
22.5°	1094.1	1083.4	1067.9	1067.9	1065.6
25°	1062.0	1052.6	1032.5	1034.7	1032.5
27.5°	1026.4	1018.1	1002.8	999.3	993.4
30°	991.0	981.4	963.7	960.1	955.4
32.5°	953.0	946.0	927.0	919.8	915.0
35°	916.3	904.5	885.5	878.3	872.4
37.5°	874.8	864.1	845.1	836.8	830.9
40°	832.2	822.6	803.6	793.0	788.3
42.5°	790.7	781.1	762.2	750.3	743.2
45°	745.6	737.4	719.5	706.5	701.7
47.5°	701.7	693.4	674.5	661.4	654.4
50°	655.5	649.5	633.0	616.3	610.4
52.5°	610.4	602.2	586.8	573.7	565.4
55°	564.3	557.1	542.9	528.7	522.8
57.5°	518.0	512.1	496.6	482.4	477.7
60°	471.7	467.0	450.5	437.4	433.9
62.5°	426.7	418.4	406.6	394.7	390.0
65°	380.6	373.3	361.5	350.9	345.0
67.5°	333.1	327.1	316.6	308.2	303.5
70°	289.2	284.5	273.8	265.5	260.8
72.5°	244.3	239.4	233.6	225.2	221.7
75°	199.1	196.8	190.8	183.7	186.1
77.5°	158.8	154.0	151.7	148.1	144.6
80°	118.6	117.3	114.9	111.4	109.1
82.5°	80.6	80.6	79.5	74.7	74.7
85°	48.5	47.4	46.3	42.6	41.5
87.5°	21.4	19.0	16.6	13.1	11.8
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	14.99	16.60	15.35	16.91	17.23	14.54	16.15	14.91	16.47	16.78
	3H	16.74	18.19	17.11	18.52	18.88	16.25	17.70	16.62	18.03	18.39
	4H	17.38	18.75	17.78	19.10	19.48	16.89	18.26	17.29	18.61	18.98
	6H	17.85	19.12	18.26	19.49	19.88	17.35	18.62	17.76	18.98	19.38
	8H	18.00	19.21	18.42	19.60	19.99	17.49	18.70	17.92	19.09	19.49
	12H	18.09	19.25	18.52	19.63	20.06	17.57	18.73	18.00	19.12	19.54
4H	2H	15.55	16.92	15.95	17.26	17.64	15.19	16.56	15.59	16.91	17.29
	3H	17.52	18.67	17.93	19.07	19.47	17.12	18.26	17.53	18.66	19.06
	4H	18.30	19.33	18.73	19.75	20.18	17.88	18.91	18.31	19.32	19.76
	6H	18.90	19.80	19.35	20.24	20.70	18.46	19.37	18.92	19.81	20.26
	8H	19.08	19.93	19.55	20.37	20.84	18.65	19.49	19.11	19.94	20.40
	12H	19.22	19.98	19.70	20.45	20.92	18.76	19.52	19.24	20.00	20.47
8H	4H	18.57	19.42	19.03	19.86	20.33	18.20	19.04	18.66	19.49	19.95
	6H	19.29	19.99	19.78	20.48	20.95	18.90	19.61	19.40	20.10	20.57
	8H	19.55	20.18	20.06	20.68	21.17	19.15	19.78	19.66	20.29	20.78
	12H	19.75	20.30	20.25	20.79	21.35	19.33	19.89	19.84	20.38	20.94
12H	4H	18.60	19.36	19.08	19.83	20.30	18.23	18.99	18.71	19.47	19.94
	6H	19.33	19.96	19.84	20.47	20.96	18.96	19.60	19.47	20.10	20.59
	8H	19.65	20.20	20.15	20.69	21.26	19.27	19.83	19.77	20.32	20.88