

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: P931422

Luminaire Tested: DFN2DS-TR3F0-080DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931422
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-TR3F0-080DS940-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

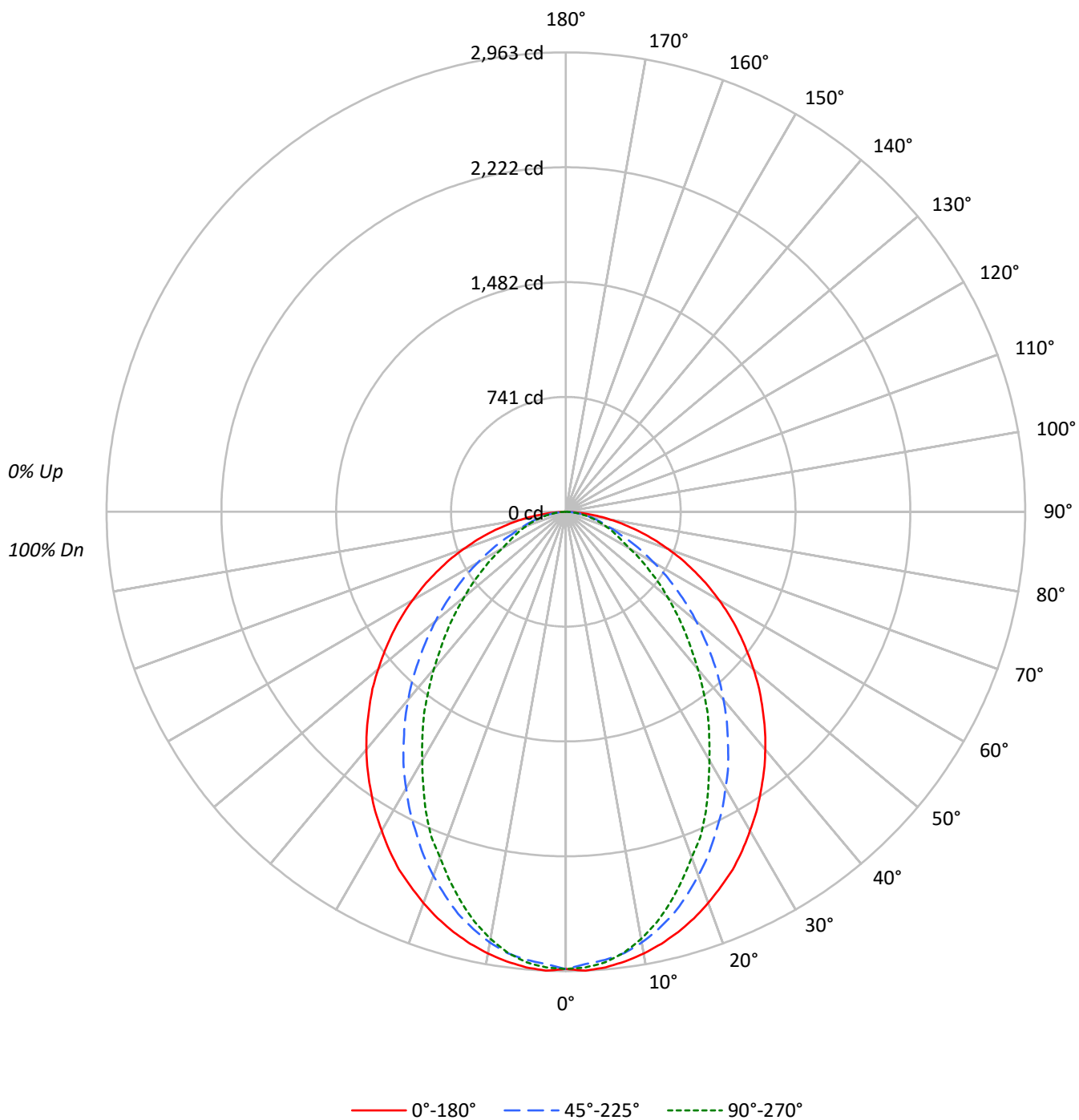
Lumens per Lamp: N/A
Luminaire Lumens: 6065.6 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 85.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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°	3675	3675	3675
5°	3689	3629	3649
10°	3661	3570	3539
15°	3619	3464	3364
20°	3561	3313	3146
25°	3501	3141	2936
30°	3418	2965	2665
35°	3338	2773	2428
40°	3256	2575	2153
45°	3161	2352	1905
50°	3063	2127	1661
55°	2963	1884	1427
60°	2847	1629	1184
65°	2715	1369	1078
70°	2558	1128	991
75°	2364	1028	926
80°	2087	919	843
85°	1640	725	725

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3161 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.4	4.6
10°-20°	758.8	12.5
20°-30°	1065.3	17.6
30°-40°	1161.3	19.1
40°-50°	1067.3	17.6
50°-60°	838.3	13.8
60°-70°	545.6	9.0
70°-80°	280.9	4.6
80°-90°	71.7	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°	2100.6	34.6
0°-40°	3261.8	53.8
0°-60°	5167.4	85.2
0°-90°	6065.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6065.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2949	2949	2949	2949	2949	
5°	2949	2936	2901	2925	2917	280
15°	2805	2776	2685	2634	2608	790
25°	2546	2461	2285	2175	2135	1171
35°	2194	2058	1823	1655	1596	1373
45°	1794	1615	1335	1145	1081	1385
55°	1364	1156	867	707	657	1219
65°	921	704	464	374	366	913
75°	491	304	214	195	192	519
85°	115	59	51	51	51	138
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2949.3	2949.3	2949.3	2949.3	2949.3
2.5°	2962.6	2949.3	2919.9	2946.7	2941.4
5°	2949.3	2936.0	2901.1	2925.2	2917.3
7.5°	2925.2	2909.3	2872.0	2882.5	2869.1
10°	2893.2	2874.6	2821.3	2813.1	2797.2
12.5°	2853.3	2829.2	2757.0	2741.1	2711.7
15°	2805.2	2775.7	2685.1	2634.4	2607.8
17.5°	2749.1	2706.3	2594.2	2535.6	2492.8
20°	2685.1	2631.6	2498.2	2431.7	2372.7
22.5°	2615.7	2554.2	2399.4	2308.8	2268.8
25°	2546.3	2460.8	2284.7	2175.4	2135.2
27.5°	2463.6	2372.7	2177.9	2052.5	1991.0
30°	2375.6	2273.9	2060.4	1924.5	1852.2
32.5°	2290.0	2167.2	1948.6	1788.3	1721.5
35°	2194.1	2057.8	1823.1	1654.9	1596.0
37.5°	2100.6	1953.7	1705.6	1521.2	1454.7
40°	2001.8	1841.8	1582.7	1393.2	1323.8
42.5°	1900.4	1729.7	1460.0	1262.4	1195.8
45°	1793.6	1614.7	1334.6	1144.9	1080.9
47.5°	1692.3	1502.8	1214.5	1024.8	966.2
50°	1580.1	1390.7	1097.1	912.7	856.9
52.5°	1470.6	1270.3	984.9	808.8	758.1
55°	1363.8	1155.7	867.4	707.4	656.7
57.5°	1254.5	1041.0	763.5	614.0	571.1
60°	1142.3	928.8	653.8	517.9	475.2
62.5°	1033.0	819.5	560.4	432.4	411.2
65°	920.9	704.5	464.4	373.8	365.5
67.5°	814.1	597.8	373.8	328.2	320.3
70°	702.0	493.9	309.5	282.9	272.1
72.5°	595.2	397.6	258.9	237.6	232.2
75°	491.0	304.2	213.5	194.8	192.3
77.5°	387.1	216.0	168.2	157.4	152.1
80°	290.8	154.9	128.0	117.5	117.5
82.5°	202.8	104.2	88.0	82.7	82.7
85°	114.7	58.6	50.7	50.7	50.7
87.5°	42.7	21.2	21.2	18.7	18.7
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	15.76	17.28	16.12	17.59	17.91	11.72	13.24	12.08	13.55	13.87
	3H	17.52	18.89	17.90	19.22	19.58	12.98	14.35	13.36	14.68	15.04
	4H	18.19	19.47	18.59	19.82	20.20	13.48	14.77	13.88	15.11	15.49
	6H	18.68	19.86	19.09	20.23	20.62	13.87	15.05	14.28	15.41	15.81
	8H	18.84	19.97	19.27	20.36	20.76	13.99	15.12	14.42	15.51	15.91
	12H	18.95	20.02	19.38	20.41	20.84	14.07	15.15	14.50	15.53	15.96
4H	2H	15.86	17.14	16.26	17.49	17.87	12.41	13.69	12.81	14.04	14.42
	3H	17.79	18.86	18.20	19.26	19.66	13.86	14.92	14.27	15.32	15.72
	4H	18.54	19.50	18.98	19.92	20.35	14.46	15.41	14.89	15.83	16.27
	6H	19.14	19.97	19.59	20.41	20.87	14.94	15.78	15.40	16.22	16.68
	8H	19.35	20.13	19.81	20.57	21.04	15.11	15.88	15.57	16.33	16.79
	12H	19.50	20.20	19.99	20.68	21.15	15.22	15.92	15.71	16.40	16.87
8H	4H	18.57	19.35	19.03	19.79	20.26	14.81	15.59	15.27	16.03	16.50
	6H	19.21	19.85	19.70	20.34	20.82	15.40	16.04	15.89	16.53	17.01
	8H	19.46	20.03	19.97	20.54	21.03	15.62	16.19	16.13	16.70	17.19
	12H	19.66	20.17	20.17	20.66	21.23	15.80	16.31	16.31	16.80	17.36
12H	4H	18.55	19.25	19.03	19.73	20.20	14.85	15.55	15.33	16.03	16.50
	6H	19.19	19.76	19.70	20.27	20.76	15.46	16.04	15.97	16.55	17.03
	8H	19.47	19.98	19.98	20.47	21.04	15.73	16.24	16.24	16.73	17.30